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AMENDMENTS TO THE CLAIMS:

This listing of claims will replace all prior versions, and listings, of claims in the application:

LISTING OF CLAIMS:

1. (Currently Amended) A method for ~~of~~ translating at least one ATM quality of service (QoS) parameter related to an ATM transmission protocol from said ATM transmission protocol to a MPLS transmission protocol for an ATM cell being sent on a connection from an ATM communication network utilizing said ATM transmission protocol to a MPLS communication network utilizing said MPLS transmission protocol, said method comprising:

mapping said at least one ATM QoS parameter to a MPLS class of service value for said connection;

mapping said MPLS class of service value and a drop precedence value of said ATM cell ~~the data element~~ to an experimental field value for ~~another parameter~~ indicating a MPLS quality of service provisioning ~~for said MPLS transmission protocol~~ ;

converting said ATM cell ~~of said connection~~ to a MPLS frame ~~associated with said MPLS transmission protocol~~ ; and ,

incorporating said experimental field value ~~another parameter~~ into said MPLS frame for transmission ~~of said MPLS frame in~~ through the MPLS network ~~with the MPLS transmission protocol,~~ ;

wherein:

said at least one ATM QoS parameter ~~further~~ includes ~~a priority rating for MPLS frame and~~ at least one of an ATM service category, a cell loss ratio , and a cell delay variation;

said experimental field value ~~another parameter~~ indicates drop precedence for said MPLS frame in addition to said MPLS class of service value ~~in said MPLS communication network~~ ; and .

~~said MPLS frame is provided to said MPLS network for transmission through a label switched path and said another parameter is inserted in an experimental field of said MPLS frame~~

said MPLS class of service value is one of a number of MPLS class of service values, said drop precedence value is one of first and second drop precedence values, said experimental field value is one of a number of experimental field values, and each of said MPLS class of service values is assigned first and second experimental field values selected from said number of experimental field values, said first and second experimental field values being associated with said first and second drop precedence values, respectively .

2-9. (Cancelled)

10. (Currently Amended) The ~~A~~ method of ~~translating at least one QoS parameter as claimed in~~ claim 1, wherein said MPLS frame is transmitted through a label switched path of said MPLS network, wherein said label switched path is an experimental inferred per hop behaviour label switched path (E-LSP) , wherein said number of MPLS class of service values is eight, wherein said number of experimental field values is eight, and wherein said first and second experimental field values are selected from first and second groups of four of said eight experimental field values, respectively .

11. (Currently Amended) The ~~A~~ method of ~~translating at least one QoS parameter as claimed in~~ claim 1, wherein said label switched path is a label inferred per hop behaviour label switched path (L-LSP) , wherein said number of MPLS class of service values is eight, and wherein said number of experimental field values is two .

12. (Currently Amended) A translation module for ~~of~~ a network element, said translation module translating at least one ATM quality of service (QoS) parameter related to an ATM transmission protocol from said ATM transmission protocol to a MPLS transmission protocol for an ATM cell being sent on a connection from an ATM communication network utilizing said ATM transmission

protocol to a MPLS communication network utilizing said MPLS transmission protocol, said network element connected to said ATM communication network and said MPLS communication network, said network element receiving said ATM cell from said ATM communication network and communicating said ATM cell to said translation module, said network element transmitting said ATM cell from said network element over said MPLS communication network after translation of said at least one ATM QoS parameter, said translation module comprising:

a control complex ~~providing management for said network element, said control complex containing a first sub-module~~ for mapping said at least one ATM QoS parameter to a MPLS class of service value for said connection;

a MPLS card connected to said control complex ~~, the MPLS card containing :~~

~~a second sub-module~~ for mapping said MPLS class of service value and a drop precedence value of the ATM cell to an experimental field value for ~~another transmission parameter~~ indicating a MPLS quality of service provisioning ~~for said MPLS transmission protocol ;~~

~~a conversion sub-module, said conversion sub-module:~~

. for converting said ATM cell ~~of said connection~~ to a MPLS frame ~~associated with said MPLS transmission protocol ; and~~ . and for

incorporating said experimental field value ~~another transmission parameter~~ into said MPLS frame for transmission ~~of said MPLS frame in~~ through the MPLS network ~~with the MPLS transmission protocol;~~ ;

wherein:

said at least one ATM QoS parameter ~~further~~ includes ~~a priority rating for said ATM cell and~~ at least one of an ATM service category, a cell loss ratio . and a cell delay variation;

said experimental field value ~~another transmission parameter~~ indicates drop precedence for said MPLS frame in addition to said MPLS class of service value ~~in said MPLS communication network~~ ; and ,

said MPLS class of service value is one of a number of MPLS class of service values, said drop precedence value is one of first and second drop precedence values, said experimental field value is one of a number of experimental field values, and each of said MPLS class of service values is assigned first and second

experimental field values selected from said number of experimental field values, said first and second experimental field values being associated with said first and second drop precedence values, respectively

~~said network element includes an ATM card, said ATM card providing an interface for said ATM network, said ATM card receiving said ATM cell from said ATM network and communicating said one ATM cell to said translation module, said ATM card is a line card, said MPLS card is a line card, said MPLS card providing an interface for said MPLS network and said MPLS card transmitting said MPLS frame over said MPLS network~~ .

13-18. (Cancelled)

19. (Currently Amended) The ~~A~~ translation module of ~~a network element as claimed in~~ claim 12, wherein said network element includes an ATM card, said ATM card providing an interface for said ATM network, said ATM card receiving said ATM cell from said ATM network and communicating said ATM cell to said translation module, said ATM card is a line card, said MPLS card is a line card, said MPLS card providing an interface for said MPLS network and said MPLS card transmitting said MPLS frame over said MPLS network ~~said network element transmits said MPLS frame over said MPLS network through a label switched path and said another transmission parameter is inserted in an experimental field of said MPLS frame~~ .

20-21. (Cancelled)

22. (Currently Amended) The ~~A~~ translation module of ~~a network element as claimed in~~ claim 12 ~~19~~ , wherein said MPLS frame is transmitted through a label switched path of said MPLS network, wherein, wherein said label switched path is an experimental inferred per hop behaviour label switched path (E-LSP) , wherein said number of MPLS class of service values is eight, wherein said number of experimental field values is eight, and wherein said first and second experimental field values are selected from first and second groups of four of said eight experimental field values, respectively .

23. (Currently Amended) The ~~A~~ translation module of ~~a network element as claimed in~~ claim 12 ~~19~~ , wherein said label switched path is a label inferred per hop behaviour label switched path (L-LSP) , wherein said number of MPLS class of service values is eight, and wherein said number of experimental field values is two .

24. (Currently Amended) A method for ~~of~~ formatting a MPLS frame ~~packet~~ to support ~~a~~ an ATM quality of service (QoS) parameter related to at least one ATM cell when said MPLS frame ~~packet~~ is transmitted on a MPLS communication network, said method comprising:

mapping said ATM QoS parameter to a MPLS class of service value for a MPLS connection for said MPLS frame ~~packet~~ ;

mapping said MPLS class of service value to an experimental field value for ~~another parameter~~ indicating a MPLS quality of service provisioning ~~for said MPLS communication network~~ ;

inserting said experimental field value ~~class of service value~~ into ~~a~~ an experimental field of a header of said MPLS frame ~~packet~~ ; and

inserting contents of said ATM cell in said MPLS frame ~~packet~~ ,

wherein said QoS parameter indicates drop precedence for the at least one ATM cell and the experimental field value ~~another parameter~~ further indicates drop precedence for said MPLS frame ~~second data element in said MPLS communication network~~ , said drop precedence of said at least one ATM cell utilizes a value of drop precedence for each of said at least one ATM cell, and said QoS parameter further includes ~~a priority rating for the at least one ATM cell and~~ at least one of ~~a~~ an ATM service category, a cell loss ratio and a cell delay variation.

25. (Currently Amended) A method for ~~of~~ routing at least one ATM cell through a MPLS network, said method comprising:

mapping ~~a~~ an ATM quality of service (QoS) parameter related to the at least one ATM cell to a MPLS class of service value for a MPLS connection for said MPLS network;

mapping said MPLS class of service value to an experimental field value for ~~another parameter~~ indicating a MPLS quality of service provisioning ~~for said MPLS communication network~~ ;

creating a MPLS frame ~~packet~~ ;

inserting said experimental field value ~~class of service~~ value into ~~a~~ an experimental field of a header of said MPLS frame ~~packet~~ ;

inserting contents of said at least one ATM cell in said MPLS frame ~~packet~~ ;

routing said MPLS frame ~~packet~~ through one or more routers ~~router~~ in said MPLS ~~communication~~ network according to ~~contents of~~ said experimental field value ~~another parameter,~~ ;

wherein :

said ATM QoS parameter indicates drop precedence for the at least one ATM cell and the experimental field value ~~another parameter~~ further indicates drop precedence for said MPLS frame ~~second data element in said MPLS network~~ , said drop precedence of said at least one ATM cell utilizes a value of drop precedence for each of said at least one ATM cell, and said ATM QoS parameter further includes a ~~priority rating for the at least one ATM cell and~~ at least one of ~~a~~ an ATM service category, a cell loss ratio , and a cell delay variation; and ,

said experimental field value specifies ~~contents of said another parameter specify~~ experimental (EXP) inferred label switched path scheduling treatment and drop precedence treatment.

26-27. (Cancelled)

28. (Currently Amended) A method for ~~of~~ transporting data traffic of a first transmission protocol through an MPLS network from an edge network element connected to an ingress point of the MPLS network to an egress point of the MPLS network, while maintaining a quality of service (QoS) of the data traffic, the method comprising:

providing a first mapping table with correspondence between a plurality of QoS parameters relating to the data traffic arriving at the edge network element and a plurality of classes of service for MPLS frames generated from the data traffic at said edge network element ~~device~~ for transmission through the MPLS network, each one of the plurality of classes of service for maintaining a QoS of its corresponding QoS parameter in the MPLS network;

identifying a QoS parameter of a data element of the data traffic arriving at the edge device over a connection and encapsulating content from the data element into a MPLS frame;

consulting the first mapping table to identify one class of the plurality of classes of service corresponding to the QoS parameter of the data ~~packet and~~ element ;

consulting a second mapping table to identify a label field value associated with the one class of service and with a drop precedence value for the data element;

inserting the label field value ~~a class of service identifier associated with the one class~~ into an unused field of an ~~the~~ outer label of the MPLS frame carrying the data element; and

transporting the MPLS frame across the MPLS network, the MPLS frame identifying the one class of service and the drop precedence value for ~~of~~ the data element ~~in the MPLS frame~~ to maintain the QoS ~~QoS~~ of the data traffic.

29. (Currently Amended) The method of claim 28, wherein the unused field is ~~the~~ an EXP field of the MPLS frame.

30. (Currently Amended) The method of claim 29, wherein the first transmission protocol is ATM [,] and the data element is an ATM cell ~~, and the QoS parameter includes a drop precedence parameter taken from a CLP bit of the ATM cell~~ .

31. (Currently Amended) The method of claim 30, wherein the QoS parameter provides ~~includes a~~ scheduling priority ~~parameter~~ for the ATM cell.

32. (Currently Amended) The method of claim 31, wherein the ATM cell arrives at the edge network element in an ATM connection, and the QoS ~~QoS~~ parameter identifies: a service category for the ATM connection; a cell loss ratio (CLR) for the ATM connection; and a cell delay variation (CDV) for the ATM connection.

33. (Currently Amended) The method of claim 32, wherein for the first mapping table, each of the plurality of QoS parameters defines properties relating to at least one of an ATM service category, a CLR and a CDV.

34. (Currently Amended) The method of claim 33, wherein each of the plurality of classes of service for MPLS frames is one of eight classes, and the first mapping table defines a correspondence between:

a first class to: the properties including an ATM service category of constant bit rate (CBR); or the properties including an ATM service category of real-time variable bit rate (rtVBR) and $250us \leq CDV < 2{,}500us$;

a second class to the properties including an ATM service category of real-time variable bit rate (rtVBR) and $2{,}500us \leq CDV < 10{,}000us$;

a third class to the properties including an ATM service category of non-real-time variable bit rate (nrtVBR) and a CLR of 10^{-7};

a fourth class to the properties including an ATM service category of non-real-time variable bit rate (nrtVBR) and a CLR of 10^{-6};

a fifth class to the properties including an ATM service category of non-real-time variable bit rate (nrtVBR) and a CLR of 10^{-5};

a sixth class to the properties including an ATM service category of non-real-time variable bit rate (nrtVBR) and a CLR of 10^{-1} to 10^{-4};

a seventh class to the properties including an ATM service category of available bit rate (ABR); and

an eighth class to the properties including an ATM service category of unspecified bit rate (UBR), a CLR of any value, and a CDV of any value.

35. (Currently Amended) The method of claim 34, wherein the drop precedence value is derived from ~~QoS parameter includes~~ a cell loss priority (CLP) bit of the data element , and:

if the CLP bit is 0 and if the MPLS frame is transported over a label inferred per hop behaviour label switched path (L-LSP) , then the label field value has ~~class of service identifier includes~~ a value of "1" ~~inserted into the EXP field of the MPLS frame~~ ; and ,

if the CLP bit is 1 and if the MPLS frame is transported over a label inferred per hop behaviour label switched path (L-LSP) , then the label field value has ~~class of service identifier includes~~ a value of "2" ~~inserted into the EXP field of the MPLS frame~~ .

36. (Currently Amended) A method for ~~of~~ translating at least one quality of service (QoS) parameter related to a first cell-based transmission protocol from said first cell-based transmission protocol to a second transmission protocol for a data element being sent on a connection from ~~a first~~ a first cell-based communication network utilizing said first transmission protocol to a second communication network utilizing said second transmission protocol, said method comprising:

mapping said at least one QoS parameter to a class of service value for said connection;

mapping said class of service value and a drop precedence value of the data element to a label field value ~~another parameter~~ indicating a quality of service provisioning for said second transmission protocol;

converting said data element of said connection to a second data element associated with said second transmission protocol; and ,

incorporating said label field value ~~another parameter~~ into said second data element for transmission of said second data element in the second network with the second transmission protocol ;

wherein said class of service value is one of a number of class of service values, said drop precedence value is one of first and second drop precedence values, said label field value is one of a number of label field values, and each of said class of service values is assigned first and second label field values selected from said number of label field values, said first and second label field values being associated with said first and second drop precedence values, respectively .